

Expert™ 7070

HYDROSTATIC LEVEL TRANSMITTER

2.74

General

The MJK Expert™ 7070 Level Transmitter is an accurate 2-wire transmitter with a piezoresistive measuring system with direct air pressure and temperature compensation.

The Expert™ 7070 has a small, external diameter of 22 mm and is made of 316L stainless steel. The transmitter is designed for measuring levels and temperature in wells and drinking water tanks.

The Expert™ 7070D hydrostatic digital/analog level transmitter is a variant of the 7070 and a precision transmitter with built-in Modbus protocol for measurement readout and remote calibration during operation. It is developed for low-energy installations and hook-up with MJK Chatter™ Datalogger.

Features

- Stainless steel diaphragm, steel AISI 316L body
- 2-wire 4 - 20 mA loop powered, 10-30VDC
- Low voltage versions digital RS485 supply voltage 3,6-30VDC
- Very low drift (<0.5%) and high accuracy ($\pm 0.25\%$), year after year
- Field re-programmable for custom ranges and zero offset calibration
- Measuring ranges from 0 - 3 m to 0 - 300 m.

Applications

- Process water
- Drinking water
- Ground water bore holes
- Reservoirs.



DATASHEET

EN 2.74 EXPERT 7070 DATASHEET 1907

mjk
a xylem brand

Expert™ 7070 Level Transmitter

Specifications

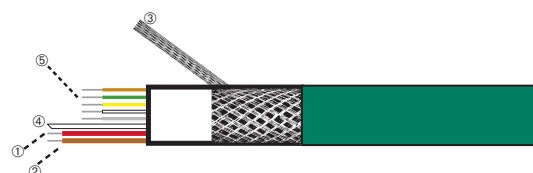
Expert 7070 Level Transmitter				
Nominal measuring range	0 - 3 m	0 - 10 m	0 - 30 m	0 - 100 m
Measuring principle	Piezo-resistive (relative pressure)			Sealed gate (SG)
Min. programmable range	0 - 2 m	0 - 4 m	0 - 12 m	0 - 50 m
Max. programmable range	0 - 4 m	0 - 12 m	0 - 50 m	0 - 100 m①
Non-standard range	Min. 0 - 2 m / Max. 0 - 300 m			
Max. overpressure	3 bar	3 bar	11 bar	20 bar
Temperature range	-10° C to 65° C			
Temp. deviation, zero point	Better than ± 0.02 % / °C			
Temp. deviation, full range	Better than ± 0.02 % / °C			
Linearity / Stability	Better than ± 0.5 % FS / ± 0.1 % FS			
Measurement accuracy	Better than ± 0.25 % FS @ +10 to 30° C Better than ± 0.5 % FS @ full temperature range			
Long time stability	Better than ± 0.5 % FS per year			
Materials	Housing and diaphragm: Stainless steel (1.4404 / AISI 316 L)			
Supply voltage	7070	10 - 30 VDC (12 - 30 VDC for cable lengths above 100 m)		
	7070D	3,6 - 30 VDC/ RS485		
Output signal	7070	2-wire 4 - 20 mA (passive transmitter)		
	7070D	Digital signal: RS485 ModBus level- and temperature transmitter signal.		
Cable	2 × 0,5 mm² (pressure) + 5 x 0,15 mm² (data), shielded, PUR insulation			
Cable length②	12 m	12 m	35 m	110 m
Enclosure	IP 68, withstands a static pressure equal to max. overpressure			
Approvals	CE directive: 89/336/EEC, 2004/108/EC, 1999/EC EN 61326-1, 61326-2-3, EN 55011, 61000-4-2, 61000-4-3, 61000-4-4, 61000-4-5, 61000-4-6, 61000-4-8 EN 61000-6-4 2007-02-19, EN 61000-6-2 2005-09-08.			

^① Can be delivered with up to 300m range. ^② Can be delivered with other cable lengths on request.

Electrical Connections

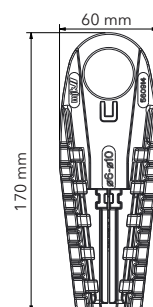
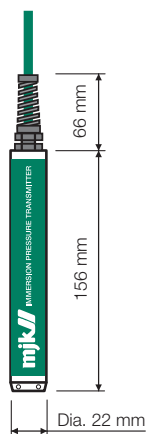


Designations		
1	Red	Positive (+) wire
2	Brown	Negative (-) wire
3	Black	Shield (NOT signal ground!)
4	Tube	Air pressure compensation tube
5	Hidden	Programming wires



⑤ Programming 7070	
Green	N/C
Brown	N/C
Yellow	RS485 B
White	N/C
Grey	RS485 A

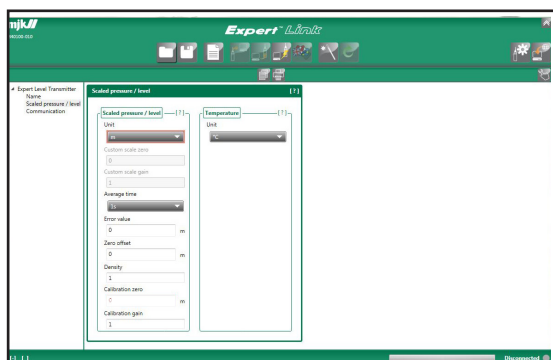
Dimensions



560914 Plastic mounting bracket for MJK Expert™ 7070 Level Transmitter (1 pcs. is delivered with each transmitter)

Expert™ 7070 Level Transmitter

Accessories



Expert Link software

840100 Expert Link for Windows for support of the Expert™ series. Use with 203992 PC (USB) Interface.

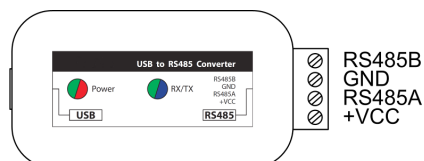
Information (pressure- and temperature range, version of software etc.):

- Indication of actual pressure value and adjusting measuring ranges
- Selection of units
- Setting of a new zero and gain for the transmitter
- Reprogramming of the analog output (i.e. different unit, other pressure range)
- Setting of the instrument address (for Bus-operation and real-time value).

Expert Link is free of charge.
Link to download center on www.mjk.com.



USB to PC
connection



203992 PC Interface used for connecting Expert™ Hydrostatic Level Transmitters to a PC using Expert Link.



202922 Transmitter connection box IP 67 enclosure for a safe connection of 4-20 mA cables.①



200126 Field indicator 531, display insert, 4-20 mA loop powered, IP 65 enclosure. For instant local readout.①

① For a complete display you need both the 200126 Field indicator 531 display insert and the 202922 Transmitter connection box.

Expert™ 7070 Level Transmitter

Order Numbers

Expert™ 7070, Piezo Resistive, Relative Pressure 4-20 mA	
202950	Hydrostatic transmitter 7070 range 0-3m
202955	Hydrostatic transmitter 7070 range 0-10m
202960	Hydrostatic transmitter 7070 range 0-30m
202967	Hydrostatic transmitter 7070 (SG) range 0-100m (0-10bar)

Expert™ 7070D, Piezo Resistive, Relative Pressure - Digital RS485/Supply 3.6 - 30VDC	
203781	Hydrostatic transmitter 7070D range 0-3m digital/analog
203782	Hydrostatic transmitter 7070D range 0-10m digital/analog
203783	Hydrostatic transmitter 7070D range 0-30m digital/analog
203784	Hydrostatic transmitter 7070D range 0-3m with connector digital/analog
203785	Hydrostatic transmitter 7070D range 0-10m with connector digital/analog
203786	Hydrostatic transmitter 7070D range 0-30m with connector digital/analog

Expert™ 7070D, Piezo Resistive, Absolute Pressure - Digital RS485/Supply 3.6 - 12VDC	
203790	Hydrostatic transmitter 7070D (ABS) range 0-4bar out. digital
203790-CON	Hydrostatic transmitter 7070D (ABS) range 0-4bar with connector out. digital

Expert™ 7070D, Piezo Resistive, Sealed Gate - Digital RS485/Supply 3.6 - 30VDC	
203791	Hydrostatic transmitter 7070D (SG) range 0-100m (0-10bar)
203793	Hydrostatic transmitter 7070D (SG) range 0-100m (0-10bar) with connector
203792	Hydrostatic transmitter 7070D (SG) range 0-300m (0-30bar)

Order Numbers Accessories

Expert™ Hydrostatic Transmitter Accessories	
109113	MJK product test certificate. Must be requested upon order!
200126	Field indicator 531, display insert, 4-20 mA loop powered
202920Ⓢ	Cable length, not standard
202922	Transmitter connection box
202925	Not standard measuring range
203992	PC Interface (USB/RS485) for Expert™ Transmitter 3400D/7060/7070
560914	Plastic mounting bracket for Expert™ Transmitter, cable Ø6-10mm
691005	Cable for Expert™ 1100, 1400, 7070, UL approved, PUR, per meter
840100	Expert Link

ⓈMUST be ordered when ordering the Expert™ level transmitter, can only be mounted on factory.